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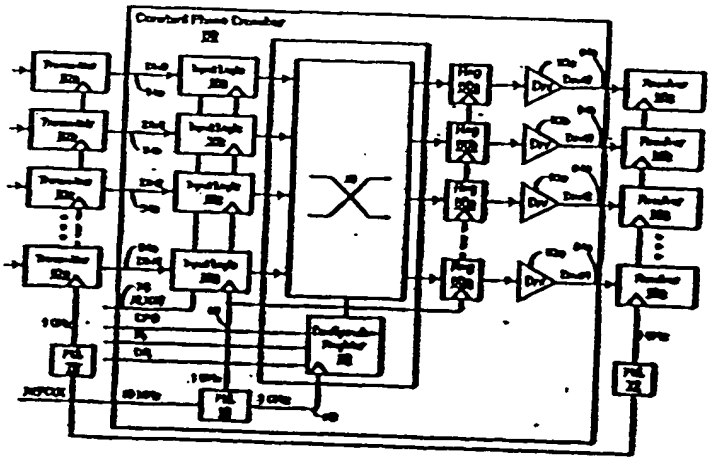
(54) Title: CONSTANT PHASE CROSSBAR SWITCH



(57) Abstract

A constant phase crossbar switch system (50) which avoids phase discontinuities at the outputs of the crossbar switch. The crossbar system includes input logic (56a—56n), a crossbar switch (58), output logic (60a—60n) and a phase locked loop (68). The phase locked loop is used to generate a high speed internal clock from a system clock. High speed serial data streams transmitted at the internal frequency are received from corresponding transmitters and are coupled to the input logic. The input logic generates multiple versions of the serial data stream, one of the versions being undelayed and the other versions delayed by some fraction of a bit time. State machines are employed to select the version of the serial data stream which results in the data stream data window being generally centered with the high speed internal clock. The selected version of the data stream is employed as the active input to the crossbar switch. The undelayed version of each of the data stream is clocked into an output register which is clocked by the internal clock. The selection of the undelayed version of the serial data stream in the described manner avoids phase discontinuities upon switching of sourcing transmitters.

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